INSTRUCTIONS

PHILCO Balanced-Unit RADIO

REG. U.S. PAT. OFF.

Model 81 Series

THIS model is a complete A.C. electric screen grid superheterodyne receiver combining the standard broadcast and the police broadcast reception. A change from one type of reception to another can be made at will. The set has a reception range from 540 kilocycles to 2500 kilocycles.

The receiver is shipped with the tubes installed in their respective sockets. Before placing the receiver in operation, be sure that the packing material around the tubes is removed. Before inserting the attachment plug of the receiver in the A.C. line outlet, see that all the tubes are seated in their socket (see Fig. 1). The terminals of the two wires must be connected to the terminals on the top of the screen grid tubes. Connect only to a source of alternating current within the limits of voltage and frequency (cycles) as listed in the name plate on the radio chassis.

Four Philco tubes are supplied. They are:

2 Philco type 77 screen grid tubes
1 Philco type 42 Pentode power amplifier tube
1 Philco type 80 rectifier tube

Use only Philco tubes in this receiver for 100 per cent. balanced-unit performance.

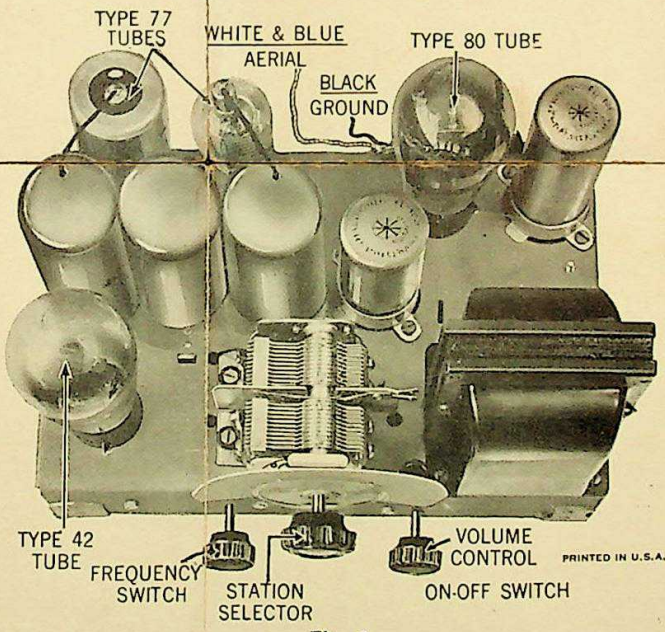

Fig. 1

Aerial

An outdoor aerial, consisting of a single copper wire 50 to 100 feet long, usually gives the best results. The lead-in wire, unless shielded, is considered an active part of the aerial. The outer end of the aerial should be as high as possible and the entire aerial should be spaced well away from trees and buildings and supported by glass or porcelain insulators. The Philco Three Purpose Complete Antenna System is highly recommended.

Ground

A suitable ground clamp and wire must be securely attached to a radiator pipe or water pipe and the bare wire end connected to the "GND" terminal.

Adjusting the Receiver

The fibre screw at the back of the radio chassis (right end when facing back of set) should be adjusted at the time of installation. Place the radio in operation as described below, tuning to a station near the middle of the dial. Turn the adjusting screw clockwise with a screwdriver until a swishing sound is heard and until a squeal is heard when different stations are tuned in. Now turn the screw counter-clockwise until the swishing sound just ceases. Continue to turn in the same direction about one quarter of a revolution beyond this point. Tune to different stations over the dial, noting that the squeal is not present on any stations received. If such a noise is present at any section of the dial, the adjusting screw should be turned farther in a counter-clockwise direction until the noise stops. For best average operation, the nut should be turned back from one-half to one turn except where extreme selectivity is required. Should the type 77 tube under the metal shield ever be replaced, this adjustment should be repeated.

NEVER ATTEMPT TO REGULATE ANY OF THE OTHER ADJUSTING NUTS AS THIS MAY CAUSE THE RADIO TO BECOME INOPERATIVE.

Operating the Receiver—*Broadcast*

After all connections have been made turn the combined "on-off" switch and volume control clockwise about one half the total range of movement. Turn the frequency change switch to the left. After the tubes heat up, turn the station selector and different stations will be tuned in at various points on the scale.

The figures on the Philco scale represent channel numbers which, by the addition of a cipher, correspond with the station broadcast frequencies in kilocycles as listed in newspapers and other station logs. For example: 85 on the scale represents channel 85 and a frequency of 850 kilocycles.

Tune the desired station accurately to the point where it is clearest, and reduce or increase the volume with the volume control—never by detuning, as detuning will spoil the tone quality.

Operating the Receiver—*Police Broadcast*

When desiring to receive the various police broadcast stations, turn the frequency change switch to the right and follow the same procedure above for tuning.

Service

Should your Philco ever require service attention, be sure that such servicing is done by an authorized Philco Dealer or Philco Service Station and that all tubes and parts used for replacement purposes are genuine Philco parts. Only with Philco parts and tubes can the Philco give its original quality performance.

Standard Warranty

We warrant each new Radio Receiver and Speaker manufactured by us to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our factory or factory depots any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original purchaser, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties expressed or implied and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of our Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of our factory or factory depots in any way so as, in our judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence, or accident, nor which has the serial number altered, effaced, or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.

PHILCO—PHILADELPHIA—TORONTO—LONDON

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· IMPORTANT ·

THIS Philco Radio is equipped for reception of police broadcast stations, aviation and amateur stations. The upper section of the Philco dial is calibrated in megacycles (1 megacycle = 1000 kilocycles). A station which is listed at 2415 kilocycles will come in at approximately 2.4 on the upper dial; a station listed at 1712 kilocycles will come in at 1.7 megacycles, etc. Municipal police stations will be heard at settings of approximately 1.7 and from 2.4 to 2.5. State police stations will be heard at 1.6 and at 2.5. Airport and airplane stations will be heard at dial settings of 2.3 and from 2.5 to 3.3 on the sets with a range above 2.5. Amateur stations may be heard from 1.7 to 2.0. Ship phone stations may occasionally be heard around 3.1. The following is a list of the police broadcasting stations in various cities throughout the United States.

· POLICE BROADCASTING STATIONS ·

City	Frequency in Kilocycles	Station
Akron, Ohio	2485	WPDO
Atlanta, Ga.	2415	WPDY
Auburn, N. Y.	1712	WPDN
	2485	WPDN
Arlington, Mass.	1712	WPED
Boston, Mass.	1554	WEY
	1712	WEY
Beaumont, Texas	1596	KGKM
	1712	KGPJ
Berkeley, Calif.	1712	KSW
	2422	KSW
Bakersfield, Calif.	2415	KGPS
Buffalo, N. Y.	2422	WMJ
Brooklyn, N. Y.	2450	WPEE
	2450	WPEF
	1596	WRDU
Butler, Penna.	257	WBR
Chicago, Ill.	1712	WPDB
	1712	WPDC
	1712	WPDD
Cincinnati, Ohio	1712	WKDU
Columbus, Ohio	2416	WPDI
	2431	WPDI
Cleveland, Ohio	2451	WRBH
Charlotte, S. C.	2485	WPDV
Cedar Rapids, Iowa	2470	KGOZ
Detroit, Mich.	2415	WCK
	1596	WKDT
	2415	WPDX
	2415	WMO
	2410	WMO
Dallas, Texas	1712	KVP
Denver, Colo.	2422	KGPX
Dayton, Ohio	2416	WPDM
Davenport, Iowa	2470	KGPN
Des Moines, Iowa	2505	KGPV
Detroit, Mich.	2410	WCK
	1712	WKDT
East Lansing, Mich.	1575	WRDS
Framington, Mass.	1575	WMP
	1662	WMP
Fort Worth, Texas	1712	KGPR
Fresno, Calif.	2416	KGZA
Flint, Mich	2422	WPDF
	2440	WPDF
Fort Wayne, Ind.	2470	WPDZ
Greensburg, Penna.	257	WJL
Grosse Point, Mich.	2415	WRDR
Grand Rapids, Mich.	2422	WPEB
Harrisburg, Penna.	257	WBA

• POLICE BROADCASTING STATIONS •

City	Frequency in Kilocycles	Station
Houston, Texas	1712	KGZB
Honolulu, T. H.	2450	KGPQ
Indianapolis, Ind.	2422	WMDZ
	1712	WMDZ
Kansas City, Mo.	2442	KGPE
Kokomo, Ind.	2470	WPDT
	2398	WPDT
Lansing, Mich.	2422	WPDL
	1662	WRDS
Los Angeles, Calif.	1712	KGPR
Louisville, Ky.	2422	WPDE
	2416	WPDE
Memphis, Tenn.	2470	WPEC
Miami, Fla.	2440	WNDA
Minneapolis, Minn.	2416	KGPB
Milwaukee, Wis.	2450	WPDK
	2452	WPDK
New York, N. Y.	1596	WCF
	2450	WPEG
	438	WPY
	500	WPY
Oklahoma City, Okla.	2452	KGPH
	2450	KGPH
Omaha, Neb.	2470	KGPI
Pasadena, Calif.	1712	KGJX
Portland, Ore.	2442	KGPP
	2452	KGPP
Passaic, N. J.	2416	WPDJ
Philadelphia, Penna.	2440	WPDP
	2470	WPDP

City	Frequency in Kilocycles	Station
Pittsburgh, Penna.	1712	WPDU
Rochester, N. Y.	1712	WPDR
Richmond, Ind.	2416	WPDH
	2422	WPDH
San Francisco, Calif.	1596	KGPD
	2410	KGPD
Shreveport, La.	1575	KGPY
St. Louis, Mo.	1712	KGPC
Sommerville, Mass.	1712	WPEH
San Antonio, Texas	1712	KGOY
	3184	KGOH
Seattle, Wash.	1596	KGPA
	2416	KGPA
	2422	KGPA
St. Paul, Minn.	2416	WPDS
Syracuse, N. Y.	2485	WPEA
Salt Lake City, Utah	2470	KGPW
San Jose, Calif.	2470	KGPM
Sioux City, Iowa	2470	KGPK
Tulare, Calif.	2416	WPDA
	2422	WPDA
Tulsa, Okla.	2450	KGPO
Toledo, Ohio	2470	WRDQ
Vellejo, Calif.	2410	KGPG
	2422	KGPG
West Reading, Penna.	257	WMB
Wyoming, Penna.	257	WDX
Washington, D. C.	2410	WPDW
Wichita, Kansas	2451	KGPZ
Youngstown, Ohio	2458	WPDG

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